FACULTEIT DIERGENEESKUNDE
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# SELECTIEVE BEHANDELING VAN NIET-ERNSTIGE KLINISCHE MASTITIS

## WEBINAR 4-12-2023 VLAIO LA PROJECT ON PRACTICE CULTURING

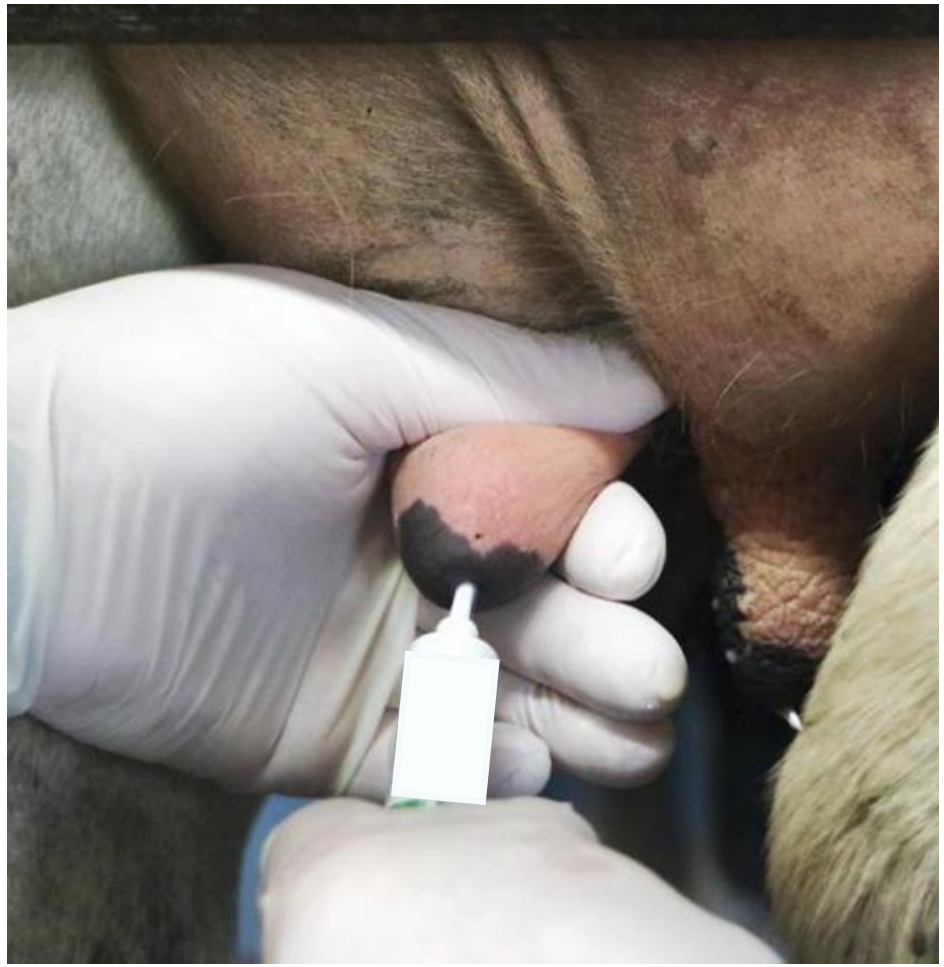
**Da Creytens Lien**

UNIVERSITEIT GENT

M-team UGent

AGENTSCHAP INNOVEREN & ONDERNEMEN

# DE BEHANDELING NU



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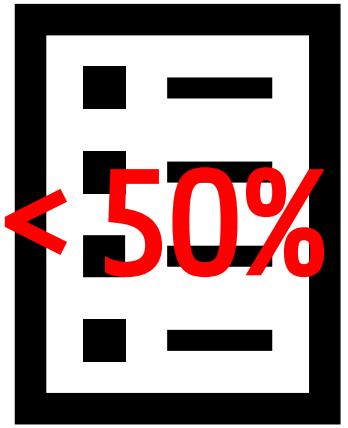


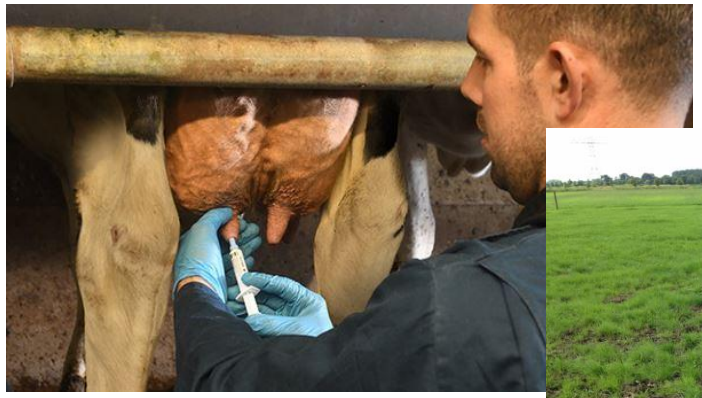

# GEVOLGEN

Antibioticaresistentie

Kosten

# KOSTEN

- 458 euro/geval van mastitis
- Totale kost van mastitis in Vlaanderen per jaar: 61 miljoen euro
- Jaarlijks productieverlies door mastitis: 17,4 miljoen euro
- Jaarlijkse hoeveelheid melk die niet kan geleverd worden door mastitis: 19 miljoen liter melk
- Jaarlijkse hoeveelheid uiertubes die gebruikt worden in Vlaanderen: 218,000 tubes
- Jaarlijks verlies aan werkuren door extra aandacht: 46,000 werkuren

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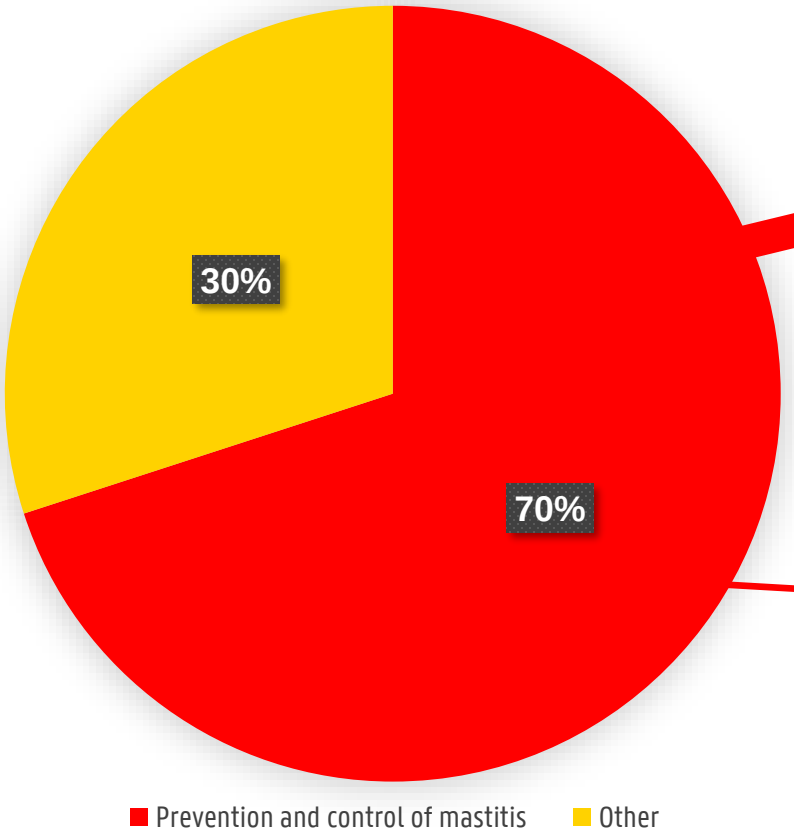
# ANTIBIOTICUMGEBRUIK OP DE VLAAMSE MELKVEEBEDRIJVEN




40%

Optimalisatie mastitismanagement en -preventie

30%

Selectief droogzetten



(Stevens et al., 2016)

# SELECTIEVE BEHANDELING VAN NIET-ERNSTIGE KLINISCHE MASTITIS

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# WAAROM?

- Antibioticaresistentie is hot topic
- Humane en dierlijke gezondheid beschermen
- Verantwoordelijk omgaan met antibiotica
- Minder antibioticagebruik
- Gericht behandelen
- Snel behandelen
- Kennis van de pathogenen

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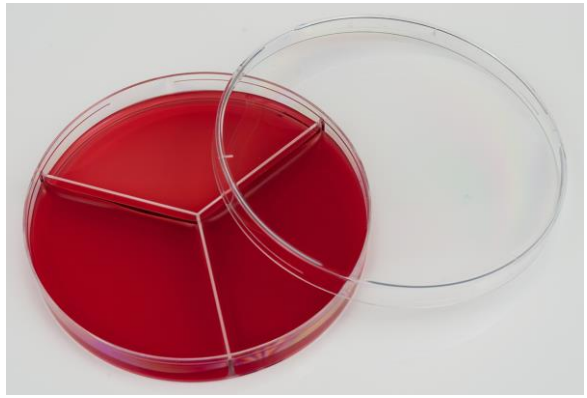
# HOE?



18- 24u

Ontstekingsremmer

# WELKE GEVALLEN?

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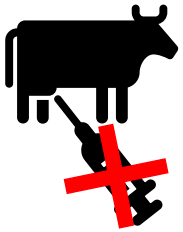
# WELKE GEVALLEN?

Gram-positieve kiemen *Staphylococcus aureus, Streptococcus uberis, Streptococcus dysgalactiae*

Polybacterieel



Gram-negatieve kiemen *E. coli, Klebsiella spp.*

*Mycoplasma spp.*

Gisten en schimmels

Niet-infectieuze oorzaken (geen groei)

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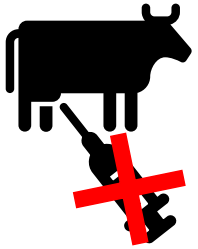


*E. coli*

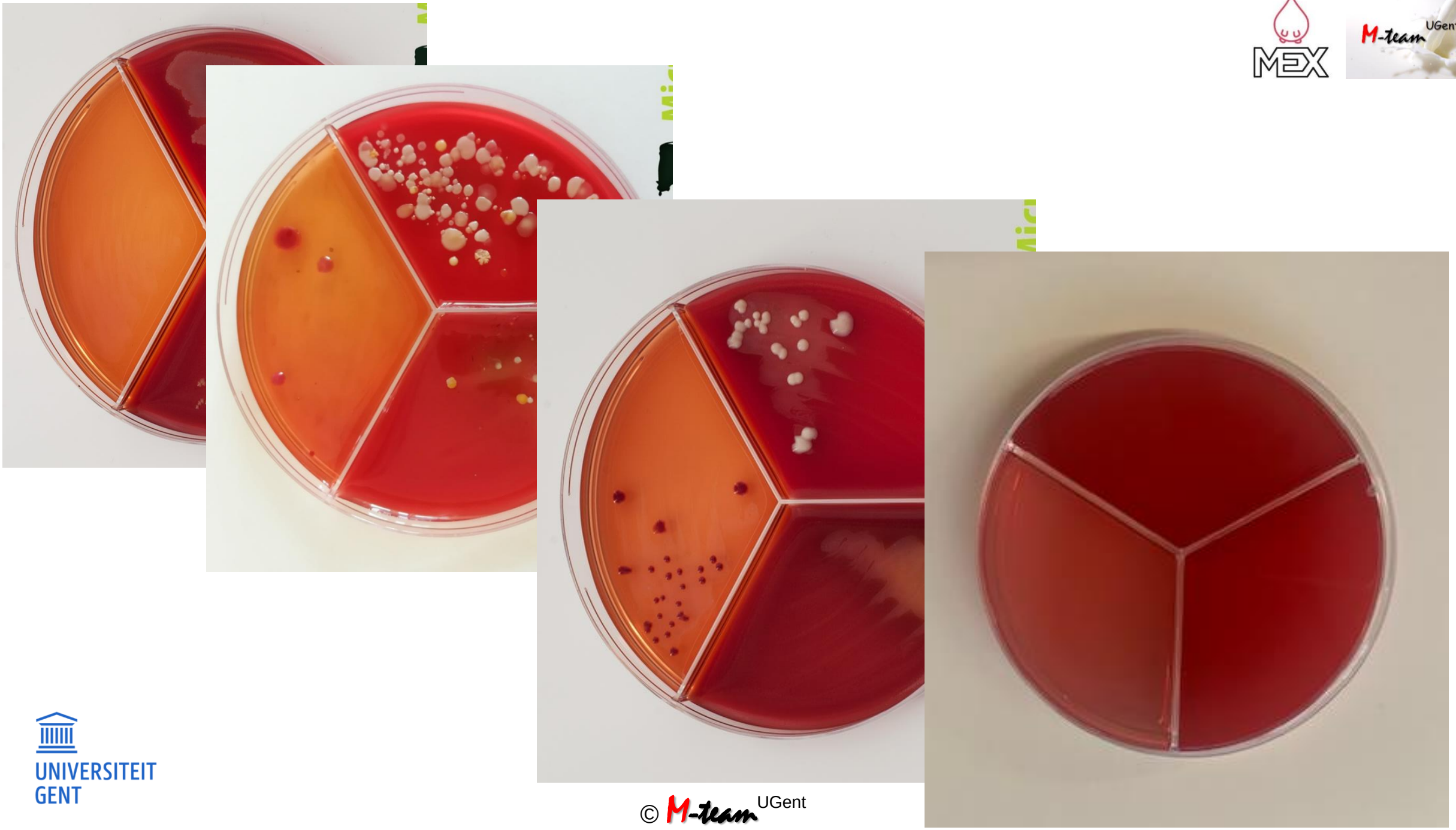
- Hoge spontane genezingsgraad
- Schade en symptomen door toxines→ drenchen, leegmelken

*Klebsiella spp.*

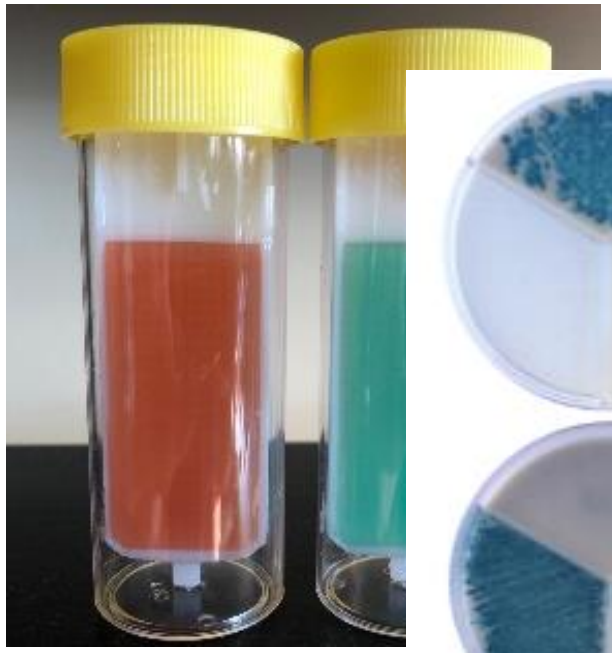
- Meestal chronisch tot fataal
- Behandeling weinig succesvol→ opruimen
- Zaagsel!

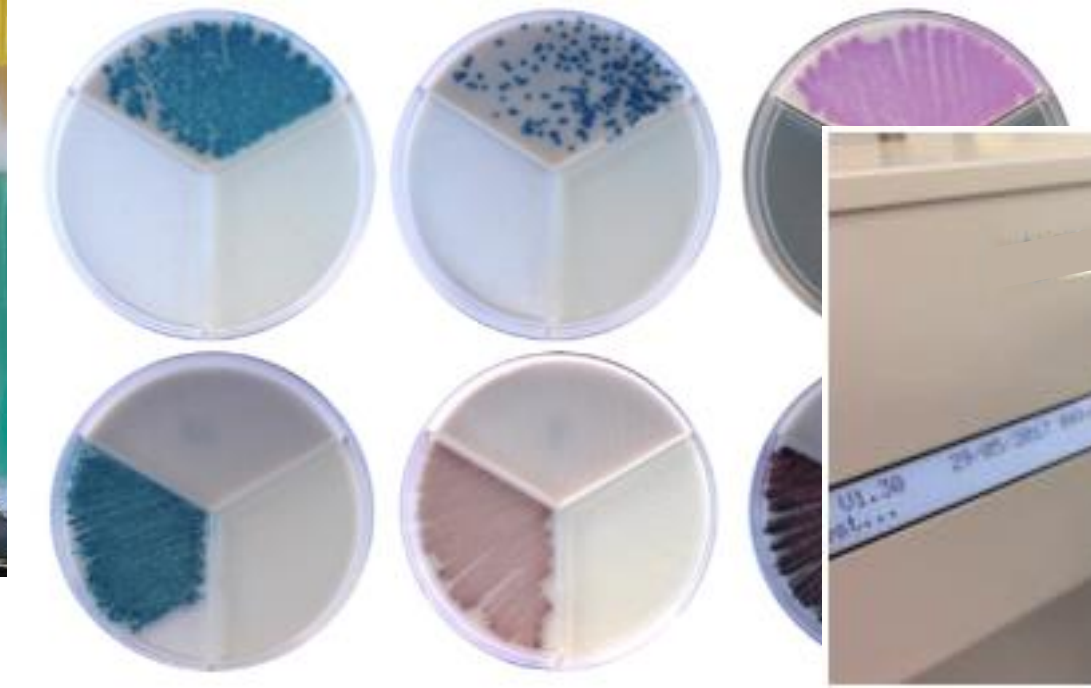
*Mycoplasma spp.*

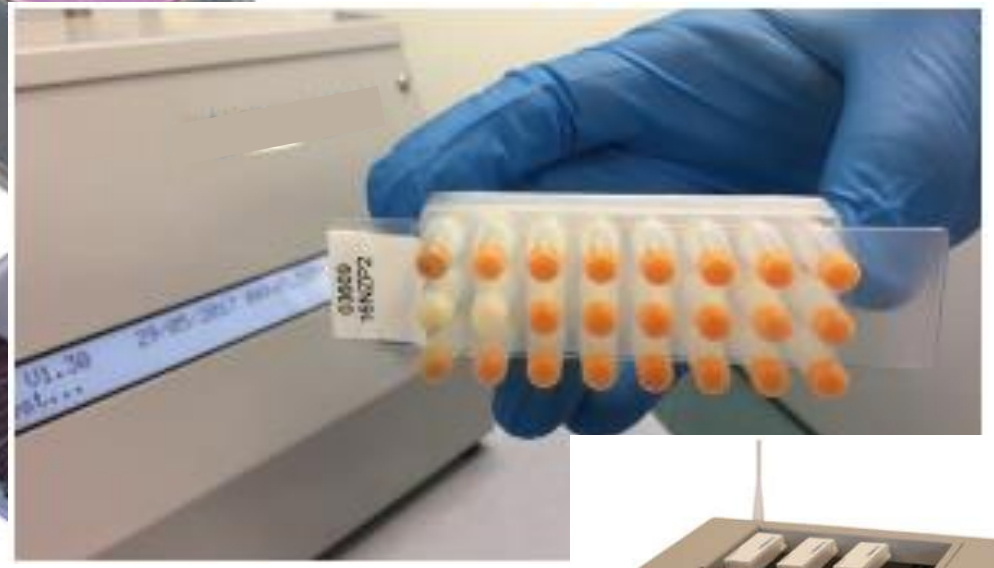
- Behandeling met antibiotica weinig effectief
- Hoge besmettelijkheid→ opruimen
- Andere bedrijfsproblemen



# SOORTEN SNELTESTEN





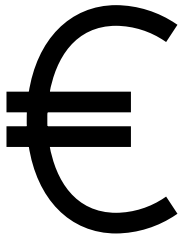


Mastitis management tool

Niet alle gevallen van mastitis “blind” behandelen

Ahv sneltesten voor kiemdetectie in de melk

Minder en strategischer gebruik van antibiotica



Minder kosten

Minder economische verliezen

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# DE WETENSCHAP

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J. Dairy Sci. 94:4441–4456
doi:10.3168/jds.2010-4046


# The selective treatment of clinical mastitis based on on-farm culture results: I. Effects on antibiotic use, milk withholding time, and short-term clinical and bacteriological outcomes

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J. Dairy Sci. 94:4457–4467
doi:10.3168/jds.2010-4047


# The selective treatment of clinical mastitis based on on-farm culture results: II. Effects on lactation performance, including clinical mastitis recurrence, somatic cell count, milk production, and cow survival

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†Department of Dairy Science, College of Agriculture and Life Sciences, University of Wisconsin, Madison 53706
‡Department of Population Medicine, Ontario Veterinary College, University of Guelph, Ontario, Canada N1G 2W1

# Selective and deferred treatment of clinical mastitis in seven New Zealand dairy herds

Andrew Bates[a,*], Richard Laven[b], Olaf Bork[c], Merlyn Hay[d], Jess McDowell[e], Bernard

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[f] *Centre for Dairy Excellence, 20, Wilson Street, Geraldine, 7930, New Zealand*



*Scientific Article*

# Antimicrobial usage and risk of retreatment for mild to moderate clinical mastitis cases on dairy farms following on-farm bacterial culture and selective therapy

S McDougall*[§], J Niethammer* and EM Graham*

CONCLUSIONS: Use of on-farm culture with selective
25% lower
in increase in
tis.

ARTICLE INFO

*Keywords:*
Mastitis
Deferred treatment
Antibiotic sensitivity
Mastatest

ABSTRACT

Mastitis is the most frequent reason for antibiotic use in New Zealand dairy
targeting this use contribute to responsible product stewardship. Rapid ide
susceptibility facilitate targeted treatment but currently involve a minim
ment systems where Gram-negative organisms are responsible for a signi
selective treatment can reduce antibiotic use without reducing clinical or

J. Dairy Sci. 100:2992–3003
https://doi.org/10.3168/jds.2016-11614


# Clinical outcome comparison of immediate blanket treatment versus a delayed pathogen-based treatment protocol for clinical mastitis in a New York dairy herd

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**ABSTRACT**

The purpose was to compare immediate intramammary antimicrobial treatment of all cases of clinical mastitis with a selective treatment protocol based on 24-h culture results. The study was conducted at a 3,500-cow commercial farm in New York. Using a randomized design, mild to moderate clinical mastitis cases were assigned to either the blanket therapy or pathogen-based therapy group. Cows in the blanket therapy group received immediate on-label intramammary treatment with ceftiofur hydrochloride for 5 d. Upon receipt of 24 h culture results, cows in the pathogen-based group

of survival 30 d postenrollment was similar between groups (odds ratio of pathogen-based = 1.6; 95% confidence interval: 0.7–3.7) as was odds of survival to 60 d (odds ratio = 1.4; 95% confidence interval: 0.7–2.6). The one significant difference found for the effect of treatment was in hospital days; pathogen-based cows experienced, on average, 3 fewer days than blanket therapy cows. A majority (68.5%) of moderate and mild clinical cases would not have been treated if all cows on this trial were enrolled in a pathogen-based protocol. The use of a strategic treatment protocol based on 24-h postmastitis pathogen results has potential to efficiently reduce antimicrobial use.

*Milk production*

# Udder health effects of an evidence-based mastitis therapy concept in Northwestern Germany

*J. Kock[1], N. Wente[1], Y. Zhang[1], J.-H. Paduch[1], S. Leimbach[1], D. Klocke[1], C.C. Gelfert[2], V. Krömker[1]*

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**Abstract**
Antibiotic use in dairy farming is a highly discussed issue in society. As
of mastitis caused by Gram-negative pathogens that did not receive antibiotic therapy were even equal to cases treated with antibiotics of

# DE WETENSCHAP

**Selective treatment of non-severe clinical mastitis does not adversely affect cure, somatic cell count, milk yield, recurrence or culling: a systematic review and meta-analysis**

**Ellen de Jong[1,2], Lien Creytens[3], Sarne De Vliegher[3], Kayley D. McCubbin[1,2], Mya Baptiste[1], Alexander A. Leung[4], David Speksnijder[5,6], Simon Dufour[2,7], John R. Middleton[8], Pamela L. Ruegg[9], Theo J.G.M. Lam[10,11], David F. Kelton[2,12], Scott McDougall[13,14], Sandra M. Godden[15], Alfonso Lago[16], Päivi J. Rajala-Schultz[17], Karin Orsel[1], Volker Krömker[18], John P. Kastelic[1], and Herman W. Barkema[1,2,4]**

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# DE WETENSCHAP

- Geen effect op klinische en bacteriologische genezing
- Melk kan sneller terug mee geleverd worden
- Geen effect op melkproductie en celgetal
- Geen effect op herval of opruimen
- Tot meer dan 50% reductie in antibioticumgebruik

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